WHAT IS CLAIMED IS:

1. In a computing device having a first expert and a second expert that recognize user input, a method of determining a parameter to tune the second expert relative to the first expert so that a mathematical combination of recognition results from the first and second experts increases overall recognition accuracy, comprising:

a) selecting a tuning sample from a set, each sample comprising input data and a label indicating an intended meaning of the input data;

b) applying the tuning sample to the first expert to obtain a first matching set of scores corresponding to prototypes that match the label and a first non-matching set of scores corresponding to prototypes that do not match the label;

c) applying the tuning sample to the second expert to obtain a second matching set of scores corresponding to prototypes that match the label and a second non-matching set of scores corresponding to prototypes that do not match the label;

d) comparing at least some of the matching scores in the first matching set to at least some of the non-matching scores in the first non-matching set, and at least some of the

matching scores in the second matching set to at least some of the non-matching scores in the second non-matching set, to determine at least one range of parameter values that when applied to the second expert do not change a correct result of the first expert to an incorrect one or improve recognition by correcting an incorrect result of the first expert;

e) recording range data about each range in a data structure;

f) repeating b) through e) for a plurality of other samples, whereby the data structure includes data about a plurality of ranges; and

g) analyzing the range data in the data structure to determine a parameter value that provides better recognition accuracy when the second expert is tuned therewith than when tuned with other parameter values.

2. The method of claim 1 wherein the tuning sample input data comprises a chirograph and the label comprises a code point.

3. The method of claim 1 wherein comparing at least some of the matching scores in the first matching set to at least some of the non-matching scores in the first non-

matching set, and at least some of the matching scores in the second matching set to at least some of the non-matching scores in the second non-matching set, to determine at least one range of parameter values that when applied to the second expert improve recognition by correcting the first expert includes, selecting a matching element comprising scores from the first and second matching sets, and selecting a non-matching element comprising scores from the first and second non-matching sets.

4. The method of claim 3 wherein the matching element is compared with the non-matching element to determine whether:

i) the first matching score and second matching scores are better than the first non-matching score and the second non-matching score, respectively;

ii) the first matching score and second matching scores are not better than the first non-matching score and the second non-matching score, respectively;

iii) the first matching score is better than the first non-matching score and the second matching score is not better than the second non-matching score; or

iv) the first matching score is not better than the first non-matching score and the second matching score is better than the second non-matching score.

5. The method of claim 4 wherein the first matching score and second matching scores are not better than the respective first non-matching score and the second non-matching score, and further comprising, selecting another matching element.

6. The method of claim 4 wherein the first matching score is better than the first non-matching score and the second matching score is not better than the second non-matching score, and further comprising, recording an upper bound for the range.

7. The method of claim 6 wherein recording an upper bound for the range includes determining that the upper bound is lower than another upper bound previously recorded for the sample.

8. The method of claim 4 wherein the first matching score is not better than the first non-matching score and the

second matching score is better than the second non-matching score, and further comprising, recording a lower bound for the range.

9. The method of claim 8 wherein recording a lower bound for the range includes determining that the lower bound is higher than another lower bound previously recorded for the sample.

10. The method of claim 1 further comprising, merging the range data for the selected sample before recording the range data.

11. The method of claim 1 wherein recording range data about each range in a data structure comprises incrementing a counter in a minima histogram and a maxima histogram based on the range data.

12. The method of claim 11 wherein analyzing the range data in the data structure comprises, obtaining a total of the differences of the counters in the minima histogram minus the counters of the maxima histogram up to a given index.

13. The method of claim 12 wherein the parameter value is based on the maximum total of a set of totals obtained for a plurality of indexes.

14. A computer-readable medium having computer-executable instructions for performing the method of claim 1.

15. A system for tuning a second expert relative to a first expert, comprising:

a range determination mechanism that applies samples of labeled recognizable data to a first expert and a second expert, each sample when applied resulting in a first matching set of scores and a first non-matching set of scores from the first expert, and a second matching set of scores and a second non-matching set of scores from the second expert, at least some of the matching and non-matching scores defining upper and lower bounds of a range of tuning parameters when compared relative to one another, and the range determination mechanism storing upper and lower bound information in a range array for at least one of the samples;

a range merging mechanism that for each range array, merges overlapping ranges therein into a merged range array;

a histogram building mechanism that increments at least one counter in a minima histogram based on any lower bound information in the merged range array and increments at least one counter in a maxima histogram based on any upper bound information in the merged range array; and

a histogram analysis mechanism that analyzes the counters in the maxima and minima histograms to determine a parameter value that tunes the second expert relative to the first to in a manner that improves overall recognition relative to other parameter values.

16. The system of claim 15 wherein the samples of labeled recognizable data each comprise a chirograph and an associated code point.

17. The system of claim 15 wherein each expert obtains the matching and non-matching scores by comparing the sample against information in a prototype database.

18. The system of claim 15 wherein the range determination mechanism determines an upper bound when a selected first matching element score is better than a selected first non-matching element score, and a corresponding

selected second matching element score is not better than a corresponding selected second non-matching element score.

19. The system of claim 18 wherein the range determination mechanism tracks the lowest upper bound for a selected matching element.

20. The system of claim 15 wherein the range determination mechanism determines a lower bound when a selected first matching element score is not better than a selected first non-matching element score, and a corresponding selected second matching element score is better than a corresponding selected second non-matching element score.

21. The system of claim 20 wherein the range determination mechanism tracks the highest lower bound for a selected matching element.

22. In a computing device having a first expert, a second expert and a third expert that recognize user input, a method of determining one parameter to tune the second expert and another parameter to tune the third expert relative to the first expert so that a mathematical combination of recognition

results from the first, second and third experts increases overall recognition accuracy, the method comprising:

a) selecting only the first expert as a combined expert and a selected one of the second or third experts as a selected other expert and the non-selected one as the non-selected expert;

b) selecting a tuning sample from a set, each sample comprising input data and a label indicating an intended meaning of the input data;

c) applying the tuning sample to the combined expert to obtain a first matching set of scores corresponding to prototypes that match the label and a first non-matching set of scores corresponding to prototypes that do not match the label;

d) applying the tuning sample to the selected other expert to obtain a second matching set of scores corresponding to prototypes that match the label and a second non-matching set of scores corresponding to prototypes that do not match the label;

e) comparing at least some of the matching scores in the first matching set to at least some of the non-matching scores in the first non-matching set, and at least some of the matching scores in the second matching set to at least some of

the non-matching scores in the second non-matching set, to determine at least one range of parameter values that when applied to the selected other expert do not change a correct result of the combined expert to an incorrect one or improve recognition by correcting an incorrect result of the combined expert;

f) recording range data about each range in a data structure;

g) repeating c) through f) for a plurality of other samples, whereby the data structure includes data about a plurality of ranges;

h) analyzing the range data in the data structure to determine a parameter value that provides better recognition accuracy when the selected other expert is tuned therewith than when tuned with other parameter values;

i) selecting the first and selected other expert with the parameter value applied thereto as the combined expert, and selecting the non-selected expert as a new selected other expert; and

j) repeating steps b)- h) at least one other time to obtain a new parameter value for the newly selected other expert.